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| [**https://www.centurylink.com/wholesale/pcat/911.html**](https://www.centurylink.com/wholesale/pcat/911.html) |

**Access to Emergency Services (911/E911) - V41.0**



**Product Description**

Access to Emergency Services, Basic 911 and Enhanced 911 (E911) Emergency Service provides the capability to route end-users calls to an emergency service bureau or the Public Safety Answering Point (PSAP), by dialing the 3-digit universal emergency telephone number 911. CenturyLink™ provides access to emergency services for all end-users. Access to this service consists of the various components of a 911/E911 system, which consists of 911/E911 trunking, 911/E911 routing, and the E911 database and associated database updates. You are responsible for providing the facility for 911/E911 trunking to the Selective Router (SR) or PSAP. For a diagram of the 911/E911 Infrastructure, refer to [the Infrastructure Diagram](https://www.centurylink.com/wholesale/downloads/2011/111216/911_Infrastructure_Diagram_Download_11-23-11.doc). CenturyLink provides you access to 911/E911 service according to the terms your Commission-approved Interconnection Agreements.

**Basic 911 Service**

Basic 911 service provides routing of all 911 calls originated from telephones within a local exchange switch to a single PSAP. Basic 911 service may be provided in areas where E911 service is not available. Basic 911 service includes the following components:

* 911 Trunking
* 911 Routing
* E911 Service

**Enhanced 911 Service**

E911 provides additional selective routing flexibility for 911 calls. E911 uses end-user data contained in the E911 database to determine routing to the appropriate PSAP. The E911 database provides the PSAP with the name and street address of the calling party. The database must be updated when an end-user changes local service provider, Telephone Number (TN), name, or street address. Where CenturyLink provides E911 services, the E911 database is managed by Intrado, Inc. Intrado Inc. is a third party database manager that provides E911 database management services for CenturyLink, other local exchange carriers, and CLECs. E911 service includes the following components:

* E911 Trunking
* E911 Selective Router (SR)
* E911 Database
* E911 Database Updates

The basic components for establishing connectivity to CenturyLink's 911/E911 service are described below. CenturyLink and you will each be responsible for the portions of the 911 system for which it has total control, including any necessary maintenance to their portion of the 911 system.

**911/E911 Trunking** - These trunks interconnect an end office switch, either owned by CenturyLink or a CLEC, to the government agency that answers emergency calls. Basic 911 trunks extend directly from the end office switch to a PSAP, or in some cases, to a SR, with separate E911 trunks extending from the SR to the emergency agency. Enhanced 911 trunks extend from an end office switch to a SR with separate E911 trunks extending from the SR to the emergency agency. A facility-based CLEC that operates its own end office switch must provide facilities to allow for interconnection to the 911/E911 network to the SR or PSAP. Trunks are then established over this facility.

**E911 Selective Router (SR)** - The E911 SR acts as a tandem switch in the E911 network. CenturyLink provisions 911 through the E911 SR (tandem). The E911 SR is connected, by E911 trunks, to each of the end office switches in the geographical area served by the router. The SR is also connected by E911 trunks to each of the government agencies served by the router. The SR feature enables emergency calls from different TNs (within the same Central Office (CO) prefix boundary) to be routed to different PSAPs on the basis of the identified Automatic Number Identification (ANI) of the telephone used to place the call. Upon request, through your [CenturyLink Service Manager](https://www.centurylink.com/wholesale/clecs/accountmanagers.html), CenturyLink will provide you with the identification of the CenturyLink E911 SR that serves each geographic area served by you.

**Public Safety Answering Point (PSAP)** - The PSAP is the name for the government agency that answers emergency calls. The PSAP may be connected directly to a particular end office switch through either Basic 911 trunks or through a SR for E911. By definition, the PSAP may be a municipality, state, local government unit, or an authorized agent of one or more of these units. The PSAP must be legally authorized to subscribe to the service and have public safety responsibility (by law) to respond to public emergency calls within pre-defined serving area(s) arranged for 911 calling. The CenturyLink Service Manager will provide you with the 10-digit TNs (provided by each PSAP agency to CenturyLink) of each PSAP agency for which CenturyLink provides the 911 function. These TNs are to be used by you to acquire emergency TNs for operators to handle emergency calls in those instances where your end-user dials "0" instead of "911". It is your responsibility to verify or confirm the appropriate use of the contact information provided by CenturyLink with each PSAP prior to offering 911 calls or publication of such data.

**E911 Database** - The E911 database contains end-user information (including name, address, TN, and occasionally special information from the local service provider or end-user) used to determine routing of the call to the appropriate PSAP and to provide Automatic Location Identification (ALI) information to the designated PSAP.  Where CenturyLink provides E911 services, the E911 database is managed by Intrado Inc.

**E911 Database Updates** - The E911 database must be updated when an end-user changes local service provider, TN, name, or street address. You are responsible for providing information to update the E911 database. All Service Providers must implement data exchange standards as established by the National Emergency Number Association (NENA).

**Automatic Location Identification (ALI)** is an E911 feature that identifies and forwards the originating caller address and related information to a designated PSAP. This information is displayed on the PSAP computer consoles at the time the call is answered. The ANI data generated by the end office is used to retrieve the ALI information.

**Private Switch/Automatic Location Identification (PS/ALI)** is offered as an additional capability of E911 emergency response systems that provides end-users using a private telephone switch, such as Private Branch Exchange (PBX) or some Centrex/Centrons with the SR and/or ALI feature(s) of E911 for individual telephone stations served by the PBX/Centrex/Centron (private switch). This additional capability allows the private switch to forward ANI data to the SR and for the inclusion of individual subscriber address and location information in the ALI Database. It is offered separately from E911 services. PS/ALI offered to Facilities-Based CLECs, Resellers, and UNE-P Providers through CenturyLink Operating Companies Tariff F.C.C. No. 11 and the respective state access tariff only. PS/ALI is not available at a Resale discount (except in MN and WY). Effective April 18, 2019 PS/ALI is no longer available in the state of Washington.

**911/E911 Interconnection Configurations**

911/E911 Interconnection is available to the CLECs in the following interconnection configurations:

* [CenturyLink 911 Resale](https://www.centurylink.com/wholesale/downloads/2011/111216/CenturyLink_911_Resale_Download_11-23-11.doc)
* [CLEC Facilities-Based Interconnection](https://www.centurylink.com/wholesale/downloads/2011/111216/DNLD_CLECFacilities-BasedInterconnection11-23-11.doc)
* [Unbundled Network Elements (UNE)](https://www.centurylink.com/wholesale/downloads/2011/111216/UNE_Download_11-23-11.doc)
* [Originating Service Provider (OSP) Interface Specification](https://www.centurylink.com/wholesale/downloads/2020/200122/OriginatingServiceProviderOSPInterfaceSpecification.docx)

In addition, specific arrangements are also required in association with the following services:

* [Local Number Portability/911 (LNP/911)](https://www.centurylink.com/wholesale/downloads/2011/111216/LNP_Download_Update_v6_11-23-11.doc)
* [PS/ALI for Facilities-Based CLECs](https://www.centurylink.com/wholesale/downloads/2011/111216/PSALIforFacilities-BasedCLECs11-23-11.doc)
* [PS/ALI for Resale Based CLECs](https://www.centurylink.com/wholesale/downloads/2011/111216/PSALIforResaleBasedCLECs11-23-11.doc)
* PS/ALI for compatible commercial, finished service, local exchange services products (e.g. CenturyLink™ Local Services Platform (CLSP™)). Contact your [CenturyLink Account Representative](https://www.centurylink.com/wholesale/clecs/accountmanagers.html) for additional information".

**Availability**

911/E911 is available where facilities and equipment exist throughout [CenturyLink QC](https://www.centurylink.com/wholesale/pcat/territory.html).

Public agencies determine whether Basic 911 or E911 service will be used in a particular geographic area, and how each end office switch will access the PSAP. The public agency is the primary decision-maker for trunk group design, size and routing.

PS/ALI is only available in community areas where E911 is currently being supported.

NOTE: Anytime a telephone service provider (TSP) needs an address verified, they can send the request to analyst\_or@west.com and someone at West Telecom Services will work with the county to get the address corrected in ALI. Please make sure the TSP includes the customer's name and phone number so they can refer this to the county.

**Technical Publications**

Technical requirements, including Network Channel/Network Channel Interface (NC/NCI™) codes are specified in CenturyLink Enhanced 911Private Switch/Automatic Location Identification Service Network Interface Specifications [Technical Publication - 77338](http://centurylink.com/techpub/77338/77338.pdf).

**Pricing**

**Rate Structure**

CenturyLink does not charge you for access to 911/E911 service, however, you are responsible for delivering calls to the 911/E911 router or the PSAP. The management of the E911 database is performed by Intrado Inc., who may assess charges to both CenturyLink and you for updates to the E911 database and for other services, such as providing copies of the Master Street Address Guide (MSAG).

CenturyLink, or its designated database provider, will provide you an initial copy of the most recent MSAG and subsequent versions on a quarterly basis at no charge. MSAGs requested outside the quarterly schedule will be provided and you will be charged on an Individual Case Basis (ICB). The data is provided in a computer readable format. The MSAG is a product of the government agency (PSAP authority) for a particular county/state.

You will separately negotiate with each county regarding the collection and reimbursement to the county of applicable end-user taxes for 911/E911 service.

Recurring and nonrecurring charges do not apply to 911/E911.

You must provide a facility between your end-office and the designated 911 SR with the exception of Colorado where CenturyLink must come to your end-office.

**PS/ALI**

You will be charged applicable rates for PS/ALI that include charges for establishing the service, dedicated Emergency Services (ES) Centralized Automatic Message Accounting (CAMA) trunks/transport, and storage and retrieval of the PBX/Centrex/Centron records.

Recurring charges are comprised of the following rate elements:

ALI SR
Trunk charges

Mileage

Nonrecurring charges are comprised of the following rate elements:

Loop charges

Transport

Chanelization

SR

Additional pricing information regarding PS/ALI can be found as follows:

* [PS/ALI for Facilities-Based CLECs](https://www.centurylink.com/wholesale/downloads/2011/111216/PSALIforFacilities-BasedCLECs11-23-11.doc)
* [PS/ALI for Resale Based CLECs](https://www.centurylink.com/wholesale/downloads/2011/111216/PSALIforResaleBasedCLECs11-23-11.doc)
* PS/ALI for Commercial Local Exchange Services, contact your [CenturyLink Account Representative](https://www.centurylink.com/wholesale/clecs/accountmanagers.html) for additional information

**Features/Benefits**

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| **Features** | **Benefits** |
| 911 service is available on a stand-alone basis, with ANI (Basic 911 with ANI), or with service features Called Party Hold, Emergency Ring Back, Forced Disconnect and/or Switch Hook Status, where available. | ANI is a Basic 911 or E911 feature that identifies and forwards the caller's TNs to a designated PSAP. The number displays on the PSAPs computer terminal at the time the call is answered. |
| E911 is available with ANI, SR, ALI, and PS/ALI. | ALI is an E911 feature that identifies and forwards the caller's address and related information to a designated PSAP. The information displays on the PSAPs computer console at the time the call is answered. |
| PS/ALI feature capability provides you the opportunity to identify the PBX/Centrex/Centron individual end-user's name, address and location information to the PSAP operator. | Without the PS/ALI capability, only the lead PBX TN and address information is provided to the PSAP. The absence of the individual station name, address and location information has the potential to result in delays in dispatching emergency response personnel to the exact location. |

**Applications**

Access to Emergency Services (911/E911) offers you the opportunity to provide emergency services to your end-users served by or located in areas served by the CenturyLink 911/E911 network. This offering provides the ability to interconnect with the CenturyLink E911 tandems and access all subtending PSAPs as either a Reseller or as a Facilities-Based CLEC.

**Implementation**

**Product Prerequisites**

If you are a new CLEC and are ready to do business with CenturyLink, view [Getting Started as a Facility-Based CLEC](https://www.centurylink.com/wholesale/clecs/clec_index.html) or [Getting Started as a Reseller](https://www.centurylink.com/wholesale/clecs/reseller_index.html). If you are an existing CLEC wishing to amend your Interconnection Agreement or your New Customer Questionnaire, you can find additional information in the [Interconnection Agreement](https://www.centurylink.com/wholesale/clecs/negotiations.html).

The following information represents overall guidelines for implementing 911/E911 service within the [CenturyLink QC](https://www.centurylink.com/wholesale/pcat/territory.html). E911 serving arrangements are provided in accordance with the standards of the E911 Authorities and NENA. A particular state may have unique 911 requirements. Any unique 911 requirements will be reviewed during your initial service planning meeting with the CenturyLink Service Manager and the PSAP Authority Board Representative (see Pre-Ordering section for more information regarding the initial service planning meeting).

For PS/ALI, it is very important that you work closely with your CenturyLink Service Manager to ensure the following is completed prior to issuing a request:

* Verify with the State Database Coordinator that E911 service is available in the specific community and determine if the E911 system has SR
* Verify that your end-user's PBX/Centrex/Centron equipment has the capability for PS/ALI service
* Contact the PSAP Manager to sign a [E911 PS/ALI Service Provider Authorization](https://www.centurylink.com/wholesale/downloads/2015/150116/DNLD_E911PS_ALIServiceProviderAuthorizationV19_11_23_11_clean.doc)
* You and a PSAP Representative should sign a PS/ALI – E911 PSAP NOTIFICATION FORM. To download a copy of the form, click on [PS/ALI – E911 PSAP NOTIFICATION FORM](https://www.centurylink.com/wholesale/downloads/2015/150116/DNLD_PS_ALI_E911_PSAP_Notifications_Form_11_23_11.doc).
* Send a copy of the E911 PS/ALI Service Provider Authorization form to the CenturyLink State Database Coordinator and the Intrado Inc., PS/ALI Coordinator. The E911 PS/ALI Service Provider Authorization form, required for PS/ALI service, authorizes your PS/ALI end-user to change/add/delete their customer information, within telephone number ranges or to make individual line number changes identified on the form, in the E911 database. It is important to update this form whenever telephone numbers change for a PS/ALI end-user.

**Pre-Ordering**

General pre-ordering activities are described in the [Pre-Ordering Overview](https://www.centurylink.com/wholesale/clecs/preordering.html).

Prior to ordering 911/E911 service, it is necessary for you to perform the following activities:

* Activation of NPA/NXX code assignments and transport facilities from your switch/collocation to the CenturyLink 911 routers should precede all other work activities due to the time required to complete these activities. (Note: It is your responsibility to notify Intrado Inc., of new growth NXX codes once 911/E911 service is established).   The T1 facilities are ordered via the industry standard [Access Service Request (ASR)](https://www.centurylink.com/wholesale/forms/asr.html) process. . Refer to the appropriate Product and Services section (e.g., Digital Service Level 1 (DS1), Digital Service Level 3 (DS3)) for facility ordering guidelines.
* Your 911 service requests should be referred to your CenturyLink Service Manager prior to you requesting service. In the planning process, you must provide information to your CenturyLink Service Manager about your planned serving boundaries, including detailed graphical maps and supporting description information. The maps should provide (at a minimum) the NPA/NXX by Rate Center, specific county boundaries, and/or major street boundaries. You may obtain Rate Center information by obtaining the information from the national Local Exchange Routing Guide (LERG™). Detailed map information is publicly available and can be obtained from a variety of sources. It is also important for you to provide your planned 911 network architecture interconnection configuration.
* You should arrange a meeting with Intrado Inc. to discuss 911 database update procedures. Intrado Inc. may require a contract with you for database management services.
* You must establish a business relationship with the PSAP Authority Board. The business relationship is necessary to accomplish a variety of objectives including making decisions on CLEC 911 default routing configurations, proper 911 surcharge, and network cost recovery billing. Your CenturyLink Service Manager will provide the appropriate PSAP Authority Board contact information to you. To properly identify the PSAP Authority Board representatives, you must define your planned serving boundaries (as outlined above). Once provided, your CenturyLink Service Manager is in position to properly identify the appropriate PSAP Authority Board contacts
* The Facility-Based CLEC must obtain a Letter of Authorization (LOA) from the serving PSAP prior to initiating requests for 911 services.

Once you have been provided the PSAP Authority Board contact information, you should schedule a joint planning meeting with the PSAP Authority Board and your CenturyLink Service Manager.

To assist the PSAP Authority Board in the planning meeting (referenced above), your CenturyLink Service Manager can obtain geographical map information describing the existing CenturyLink/PSAP Metropolitan Statistical Area (MSA) E911 configuration. The maps will be prepared (proactively) anticipating the PSAP Authority Board will need to reference the information. Preparing the maps prior to the meeting will enable the PSAP Authority Board to easily compare and cross-reference its existing jurisdictional boundaries vs. your planned serving boundaries (your maps).

**Joint Planning Meeting**

The following (at a minimum) should be brought to the joint planning meetings:

* Your planned serving area geographical maps and network architecture configurations.
* CenturyLink geographical maps illustrating the existing E911 network configuration.

The suggested meeting objectives (at a minimum) include:

* Your introduction to the PSAP Authority Board representatives.
* Review and discuss your plans for providing local telephone service. You will present your plans for providing local telephone service using the maps to graphically illustrate your planned serving area boundaries. The CenturyLink maps are presented to illustrate the PSAP Authority Board jurisdictional boundaries. By comparing both maps, you and PSAP Authority Board are in an excellent position to discuss and finalize your default routing configuration in the event of an ANI failure.
* Discuss and agree to your PSAP default routing scheme.
* Identify the appropriate default route PSAP name (required).
* Identify the associated default routing Emergency Service Number (ESN) based on PSAP name. Note: if the PSAP Authority Board representative does not know the ESN, your CenturyLink Service Manager will assist you in obtaining the ESN number.
* Provide a Single Point of Contact (SPOC) to coordinate all 911/E911 activities. Your SPOC must be available at all times. You will exchange emergency information between you and the PSAP Authority Board. This information is critical to support a PSAP's need for a Trap and Trace situation.
* Facilitate the discussions regarding your 911 surcharges.
* Ensure you understand the proper NENA standards for database updates. CenturyLink utilizes NENA II standards.
* Other (as required).

**Ordering**

Once all critical information is obtained and agreed to, your CenturyLink Service Manager will assist you in completing the Emergency Services (ES) trunk order via an internal CenturyLink process using a CenturyLink form RG29-0029. After completion of the form, it is then submitted to the appropriate CenturyLink organizations for ordering and provisioning the ES trunk circuits. Refer to the following process flows for 911/E911 ordering and provisioning:

Process #1 - [CenturyLink Retail/Resale 911 ES Trunk Ordering/Provisioning and CenturyLink 911 EM & PSAP Data Trunk Provisioning](https://www.centurylink.com/wholesale/downloads/2011/111216/911ProcessFlowResale-Download11-23-11.doc)
Process #2 - [Facility-Based CLEC ES Trunk Provisioning](https://www.centurylink.com/wholesale/downloads/2011/111216/911ProcessFlowFacilitiesBasedDownload11-23-11.doc)
Process #2a - [Facility-Based CLEC ES Trunk Provisioning (Minnesota Option)](https://www.centurylink.com/wholesale/downloads/2011/111216/DNLDMNFacBasedCLECESTrunkProvisioning11-23-11.doc)
Process #3 - [Unbundled Network Elements](https://www.centurylink.com/wholesale/downloads/2011/111216/911ProcessFlowUNEDownload11-23-11.doc)
Process #4 - [Interim Number Portability](https://www.centurylink.com/wholesale/downloads/2011/111216/911-E911ProcessFlowINPDownload11-23-11.doc)
Process #5 - [Local Number Portability](https://www.centurylink.com/wholesale/downloads/2011/111216/LNPProcessFlowDownloadable11-23-11.doc)
Process #6 - [Interim Number Portability (INP) to LNP Conversion](https://www.centurylink.com/wholesale/downloads/2011/111216/INPtoLNPProcessFlowDownloadable11-23-11.doc)

**Updating/Correcting E911 Data**

Unbundled Loop providers are responsible for directly inputting updates to the E911 Automatic Location Identification (ALI) database via the service order input (SOI) process. The CenturyLink E911 Automatic Location Identification (ALI) database is managed by Intrado.

For all other products, when submitting a Local Service Request (LSR) requesting new or additional service to an address, the E911 database is updated from the service order activity associated with your LSR.  If the information in the E911 database is wrong for any reason, you must send an email to wwprojects@centurylink.com. If the City/County has initiated the change, CenturyLink should receive this change automatically; however, you may still email to wwprojects@centurylink.com and attach a copy of the City/County notification of the change to CenturyLink, or you may alternately send an email and fax the notification from the City/County with the address change information to the fax number at 218-733-0187.

This product cannot be ordered independently through EASE-LSR.

For PS/ALI Ordering information, refer to the following:

* [PS/ALI for Facilities-Based CLECs](https://www.centurylink.com/wholesale/downloads/2011/111216/PSALIforFacilities-BasedCLECs11-23-11.doc)
* [PS/ALI for Resale Based CLECs](https://www.centurylink.com/wholesale/downloads/2011/111216/PSALIforResaleBasedCLECs11-23-11.doc)
* PS/ALI for Commercial Local Exchange Services, contact your [CenturyLink Account Representative](https://www.centurylink.com/wholesale/clecs/accountmanagers.html) for additional information.

**911/E911 Installation Intervals**

A minimum interval applies to the establishment of new ES trunk groups and it is applicable to all service providers. The timeline begins with the issuance of a complete RG29-OO29 internal form and is based on 12 business days. Where new ES trunk groups are being established for NG9-1-1 system the minimum interval will be 22 business days.

**Conditions**

Failure to meet any of these conditions will seriously impair CenturyLink's ability to turn up the service on time:

* With your assistance, your CenturyLink Service Manager will complete the RG29-0029 internal form and is responsible for its distribution. The completed form must include the default Emergency Service Numbers (ESNs). You must also include a contact name and number for test and turn up and DS0 level CFA carrier/channel assignments (including any associated DS1 order numbers). Additional information for collocated CLECs can be found in the Collocation section. For a description of the provisioning process for facilities-based carriers Local Interconnect Service (LIS)/E911 trunks, refer to the LIS Trunking section.
* Transport facilities for the ES trunks are in place or pending turn-up of your system. The Due Date (DD) for your system must be on or before the DD of the ES trunks. It is advisable to have additional time between the DS1 and ES trunk DDs, in case of difficulties.

It is important to note that the 12 business day interval listed above is a minimum. E911 is a complex service involving multiple centers and work groups. PSAPs and other governance agencies must approve any 911/E911 serving arrangement and certify network performance prior to end-user calls being carried. More lead-time than the minimum greatly enhances the ability of CenturyLink to address contingencies and still meet DDs. While minor adjustments to some of the intermediate dates may occasionally be required, any reduction of the overall 12 business day interval should be considered an expedite to be negotiated on an ICB. This interval also applies to the augmentation of existing trunks groups. If multiple trunk groups are requested simultaneously, longer intervals may be appropriate and critical dates should be negotiated on a project basis.

**911/E911 Disconnect Intervals**

The minimum interval to disconnect ES trunk groups is applicable to all service providers. The timeline begins with the issuance of a complete RG29-OO29 internal form and is based on five business days.

**Provisioning and Installation**

**911/E911 Trunks**

If you have interconnected with the CenturyLink 911/E911 network using a CenturyLink Interconnection Agreement, either through resale of CenturyLink's retail services or though unbundled switching, your 911 calls are routed from the CenturyLink end office switch to the E911 SR on the same E911 trunks used for CenturyLink's end-users.

In a typical Basic 911 arrangement, a Facility-Based CLEC must establish 911 trunks from its end office switch directly to the PSAP. Each 911 call is forwarded by you over these trunks to the PSAP, whose attendants answer the emergency calls. CenturyLink does not have direct involvement in this arrangement, although you can request that CenturyLink provide the 911 trunks between your switch and the PSAP.

In a typical E911 arrangement, a Facility-Based CLEC must establish E911 trunks from its end office switch to the CenturyLink SR. In a single SR arrangement, a minimum of two dedicated 911/E911 trunks shall be established from your CO to the CenturyLink 911/E911 SR (i.e. 911 tandem) that serves the areas in which you provide Exchange Services. In a dual SR arrangement, one trunk must be provisioned to each SR. You can order diverse routing for 911/E911 circuits, if facilities are available. These trunks must be provisioned to conform to the standard CAMA signaling format. When CenturyLink facilities are available, CenturyLink will comply with diversity of facilities and systems as ordered by you. Where there is alternate routing of 911/E911 calls to a PSAP in the event of failures, CenturyLink shall make that alternate routing available to you. You may elect to provision DS1 facilities and trunks via your switch to CenturyLink 911 Router interconnection. You may also interconnect to the CenturyLink 911 router via collocation. If these trunks are arranged through collocated equipment, refer to the Collocation/Configuration Options Section for a description of the provisioning process for Facility-Based CLECs LIS/911 trunking and various tie cabling options from collocated equipment.

911 Interconnection Trunk Groups must be, at a minimum, DS0 level trunks configured as a 2-wire analog interface or as part of a digital (1.544 Mbps) interface. Either configuration must use CAMA type signaling with Multi-Frequency (MF) tones that will deliver ANI with the voice portion of the call or Signaling System 7 (SS7) if available (i.e. other signaling technology). Any signaling modifications must conform to CenturyLink and industry accepted standards and disclosures as required. All 911 interconnection trunk groups must be capable of transmitting and receiving Baudot code necessary to support the use of Telecommunications Devices for the Deaf (TTY/TDD).

You are responsible for the network management of your network components in compliance with the Network Reliability Council Recommendations and meeting the network standard for 911 call delivery.

**Standardization of 911 Trunk Group Options**

CenturyLink allows the standardization of 911 trunk group options in DMS100 911 Tandem SRs in the SS7 environment. This allows for CenturyLink to receive 911 calls from all vendor switches. The incoming 911 trunk groups at the SR will look for the ANI digits to selective route to the proper PSAP in the charge number field of the Initial Address Message (IAM). This standardizes calls where two sets of numbers can be sent to the SRs, as in Calling Party Number (CPN) versus Billing Directory Number (BLDN), where PRI trunk groups are used at the end offices.

**911/E911 Trunk Circuit Protection**

All circuits that carry 911 traffic are considered essential service circuits and must be protected from possible service outages from inadvertent intrusion by CO personnel. The 911 circuits will be provided Special Services Protection (SSP) to isolate all circuit connections and identify all circuit plugs to repair and provisioning personnel.

Proper circuit identification and protection for 911/E911 trunk circuits is essential. CenturyLink procedures for protecting 911 circuits are to attach red tags or labels to every appearance of a 911 circuit in the CO to guard against accidental intrusive access. The protected appearances include the Digital Signal Cross-connect (DSX) panels, carrier channel units, and any other access points.

CenturyLink also has procedures in place to ensure that a facility-based CLECs 911 or E911 trunks are not deactivated without adequate notice. Before any 911/E911 trunk can be deactivated by a CenturyLink employee, the CenturyLink 911 Care Center must verify that a valid deactivation service order request has been submitted by you. These deactivation procedures apply uniformly to both CenturyLink and your 911/E911 trunks.

**E911 Conversion of Multi-Frequency (MF) to SS7 Trunking**

CenturyLink's standard method for the upgrade of existing MF 911 networks to SS7 is via conversion and reuse of existing MF circuits.

CenturyLink's 911 dual tandem systems permit the primary and alternate trunk groups to be converted separately. Additionally, CenturyLink restricts 911 SS7 conversions to the maintenance window of lowest call volumes. This effectively renders the SS7 conversion completely transparent to both your end-users and the PSAP.

In a single tandem system, 911 calls are normally rerouted to the PSAP via the public switched network while the actual SS7 conversion is taking place, ensuring continuous 911 service to your end-user. Your CenturyLink Service Manager will provide you with the necessary reroute destination information and coordination to facilitate this process. If your preferred 911 trunk conversion method includes moving and testing one trunk, then moving and testing the second trunk, CenturyLink can accommodate this request. Your CenturyLink Service Manager will note this type of special request in the Remarks Section of the RG29-0029 form.

CenturyLink strongly recommends that you request your 911 SS7 conversions by reusing the existing MF circuits. Your CenturyLink Service Manager will complete the RG29-0029 form with your assistance.

**Network Management**

To ensure an appropriate grade of service for 911/E911 service is provided to end-users, CenturyLink and Facility-Based CLECs must monitor the traffic level on 911/E911 trunks and install additional trunks as required. In the event a 911/E911 call is blocked, such blockage must be detected at the originating end office switch. CenturyLink and the Facility-Based CLEC must each perform monthly studies on their own 911/E911 trunks to determine if sufficient trunks are in place to handle the emergency call volume. This blockage data is shared and discussed with the PSAP operator to ensure mutual agreement on the E911 trunk group sizing requirements between the end office switches and the SR or between the end office switches and the PSAP, if no SR is used.

If you determine, with approval from the PSAP operator, that your 911/E911 trunk quantities are insufficient to handle its emergency call volume, you may place an order with CenturyLink for additional 911 trunks. Augmentation of existing 911/E911 trunk groups follows the same provisioning process as the establishment of new groups.

**911/E911 Routing**

Public agencies determine whether 911/E911 service will be used in a particular geographic area, and how each end office switch will access the PSAP. In some cases, the public agency may choose to establish 911/E911 trunks directly between end office switches and the PSAP. In many cases, public agencies have chosen to use a SR to terminate E911 trunk groups from many end office switches and concentrate E911 trunk group(s) from the SR to the PSAP(s). The public agency also determines the quantity of trunks that are required in each 911/E911 trunk group to serve their communities. Therefore, the public agency is the primary decision-maker for trunk group size and routing.

If you route your emergency traffic from your end office switch over E911 trunks to the CenturyLink SR, you must forward the ANI of the calling party on the E911 trunk group on each E911 call. When the emergency call arrives at the SR, a SR table will identify the PSAP associated with the end-user's ANI. The SR forwards the E911 call along with the calling party's ANI to the designated PSAP over the E911 trunks between the SR and the PSAP. If the PSAP has been equipped for E911, it will query the 911 database, which returns the end-user's address that is associated with the ANI to the emergency service attendant.

**Routing Options**

A variety of routing methods are inherent in CenturyLink’s E911 Service. Two of the basic methods are "Primary" and "Default" routing and are facilitated by the 911/E911 SR.

**Primary Routing**

Negotiation of Primary Routing - Primary Routing is negotiated and established by CenturyLink and the PSAP(s). You do not establish or negotiate primary routing options, but match the primary routing options already established.

Refer to the [Primary Routing diagram](https://www.centurylink.com/wholesale/downloads/2001/010803/Primary_Routing.pdf).

Each E911 system has two Primary Routing options described as follows:

* Non-Selective Routing - All end-users/telephone numbers served by a particular CO are routed to a single, pre-defined PSAP. This means that calls are delivered to a PSAP based on CO boundaries, not political or jurisdictional boundaries. Non-Selective Routing is often provisioned in areas served by only one PSAP. When it is deployed in areas with multiple PSAPs, Default Routing often necessitates the need to transfer a 911 call to another PSAP.
* Selective Routing (SR) - End-users/telephone numbers served by a particular CO are routed to different PSAPs. Based on the calling party's address, calls are delivered to the PSAP responsible to manage and/or respond to the calling party's emergency. This type of routing reduces the need for transfers. SR is developed by you and CenturyLink. It is accomplished by creating an MSAG that identifies the responding PSAP for each street/range in the area being served by E911. In turn, the telephone numbers associated with a street/range can be routed to the appropriate PSAP. It is important to note that it is the telephone number and/or ALI Record that allows the SR feature to work properly. Without one or the other, CenturyLink's 911/E911 service reverts to Default Routing.

**Default Routing**

You are responsible to negotiate Default Routing. Default Routing needs to be negotiated for each of the service provider's incoming 911 trunk groups with the PSAP that will be receiving the defaulted calls. In some areas/states, the individual PSAP may relinquish their right to negotiate and assigns that responsibility to an authority board or individual to negotiate on their behalf. In other instances, state rules mandate selections.

Refer to the [Default Routing diagram](https://www.centurylink.com/wholesale/downloads/2001/010803/Default_Routing.pdf).

Each incoming 911/E911 trunk group that connects to the CenturyLink SR is provisioned with Default Routing. Default Routing is an E911 feature that is invoked when a 911 call cannot be "selectively routed" due to an ANI failure, a missing ALI Record, or other causes. An incoming call such as this is routed from the E911 SR (E911 tandem or control office) to a PSAP that has been selected by you to serve this purpose. There may be one, or multiple, PSAPs in an E911 system that act as the "Default PSAP". In most cases, the PSAP that receives the majority of the selectively routed calls from the 911 trunk group in question is the same PSAP that will serve to receive the default routed 911 call.

**E911 Database Services**

The E911 database contains the name, street address, ANI, and local service provider of each telephone end-user in the geographic area served by the E911 database.  Intrado Inc. will be responsible for processing and the storage of the E911 records in the database.  You shall have non-discriminatory unbundled access to the E911 database services.  Your exchanges to be included in CenturyLink's E911 Database will be indicated via written notice you provide to the appropriate 911 authority (state agency or PSAP administrator) and Intrado Inc.

**CenturyLink 911 Resale and 911 with UNEs**

For resale services, CenturyLink (or its designated database provider) will provide updates to the ALI database on behalf of you using the same procedures CenturyLink uses to update the E911 database for CenturyLink's own end-users. CenturyLink will ensure that the 911 database entries for you will be maintained with the same accuracy and reliability that CenturyLink maintains for its own end-users. CenturyLink's and your database entries are sent together in the same batch update every night on the data link to Intrado, Inc.  The batch updates include all the completed service records for that day.

When an end-user changes service providers from CenturyLink to you, and you serve your new end-user through unbundled switching or resale, and if there is no change in the end-user's telephone number, name or address, it is not necessary to send a disconnect order to the E911 database. The service provider information will be updated from the completed service order.

**Facility-Based CLECs**

You are responsible to ensure your end-user data is loaded into the E911 ALI database. You must establish a business relationship with Intrado Inc., for downloading and maintaining your end-user information. Data sent Intrado Inc. must be formatted according to the NENA recommended standards. You will provide end-user data to Intrado Inc. utilizing NENA 02-010 Recommended Formats and Protocols for ALI Data Exchange standards. You will also provide end-user data that is MSAG valid and meets all components of the NENA 02-011 Recommended Data Standards for Local Exchange Carriers, ALI service Providers and 911 Jurisdictions standard format. These standards are available at the [NENA Web Page](http://www.nena.org/), or by calling 1-800-332-3911. The registration of your Company name with NENA for an official NENA Company ID is also recommended to ensure delivery of accurate 911 ALI information.

All Service Providers must implement electronic data exchange for insertion, change, or deletion of records in CenturyLink's 911 ALI database. Intrado Inc. does not support manual data transmission, via facsimile or other methods, as a means of updating telephone end-user records in the database. PS/ALI Direct is available from Intrado Inc. at no charge. PS/ALI Direct is a file exchange interface designed to accept data files containing Service Order Input (SOI) information from a Service Provider user system via a dial-up method. Connectivity requires a modem and an outside line. In addition to providing electronic SOI processing, PS/ALI Direct offers daily MSAG changes and error and statistical file information.

When an end-user moves from CenturyLink to a Facility-Based CLEC, CenturyLink will disconnect the existing record via a service order. When the service order is completed, the CenturyLink service order system provides Intrado, Inc. with instructions designed to unlock the end-user record in the E911 ALI database. Unlocking the record allows you to initiate an update to the existing record via a migrate order, which will lock the record to you. After updating the end-user record, you are responsible to "Lock" the record. These procedures ensure that an end-user’s ALI will not be removed from the E911 database prematurely.

**PS/ALI**

The PS/ALI Database Update portion of the service is provided and maintained by Intrado Inc. Intrado Inc. will provide your PBX/Centrex/Centron end-user with secure access via a web URL. This secure URL allows your end-user the ability to access and update the ALI database with their subscriber name, address and location information.
PS/ALI Database Update access is available from CenturyLink, under the following arrangement:

* Premier PS/ALI - A web-based solution providing the ability to connect to the PS/ALI web service at Intrado, Inc. through internet access
* PS/ALI Direct - Computer to computer transfer by sending batch files containing updated PS/ALI records

You, or your PBX/Centrex/Centron end-user, will provide the input and validation of your end-user data directly into the CenturyLink ALI database. You will negotiate directly with the PSAP (or PSAP agency) and Intrado Inc. to provide the PS/ALI end-user data maintained in the ALI database.

You will be responsible for the accuracy of your end-user records.

You will provide end-user data to CenturyLink’s agent for the CenturyLink ALI database that is MSAG valid and utilizes NENA-02-010 Recommended Formats and Protocols for ALI Data Exchange, NENA 02-011 Recommended Data Standards for Local Exchange Carriers, ALI Service Providers and 911 Jurisdictions. CenturyLink will furnish you with any variations to NENA recommendations required for PS/ALI database input.

**E911 Database Accuracy**

E911 Database accuracy shall be measured jointly by the PSAPs and Intrado, Inc..  The reports shall be forwarded to you by Intrado, Inc. when relevant and will indicate incidents when incorrect or no ALI data is displayed.  The responsible party will take corrective action where required.  CenturyLink and Intrado Inc. will provide non-discriminatory error correction for records submitted to the ALI database.  For resold accounts, if Intrado, Inc. detects errors, it will attempt to correct them.  If Intrado,Inc. is unable to correct the error, Intrado, Inc. will contact CenturyLink for error resolution.  If CenturyLink is unable to resolve the error, CenturyLink will contact the Resale-CLEC for resolution.  In the case of Facilities-Based CLECs, Intrado, Inc., will interface directly with the CLEC to resolve record errors.

**Maintenance and Repair**

CenturyLink is the first point of contact for all of your and PSAP 911-repair issues within our region. The Center for 911 Customer Service in conjunction with the Network Management Center monitors the CenturyLink network facilities for service interruption and will implement alternate routing and/or contingency plans for the continuation of 911 service. You should direct all repair concerns to the Center for 911 Customer Service. The center may be reached 24 hours a day, 7 days a week at 1-800-357-0911. End-user 911 trouble reports should be referred to the end-user's local service provider.

CenturyLink shall begin restoration of 911/E911 trunking facilities immediately upon notification of failure or outage. CenturyLink must provide priority restoration of trunks or network outages on the same terms and conditions it provides itself. You will be responsible for the isolation, coordination, and restoration of all 911 network maintenance problems to your demarcation. CenturyLink will be responsible for the coordination and restoration of all 911 network maintenance problems to the CenturyLink demarcation. CenturyLink repair service includes testing and diagnostic service from a remote location, dispatch of or in-person visit(s) or personnel. When it is determined an on-site technician is required, a technician will be dispatched without delay. You are responsible for advising CenturyLink of the circuit identification when notifying CenturyLink of a failure or outage. Parties agree to work cooperatively and expeditiously to resolve any 911 outage. CenturyLink will refer network trouble to you if no defect is found in CenturyLink's network.

Refer to the following process flows for repair:

[911/E911 Repair Process Flow](https://www.centurylink.com/wholesale/downloads/2011/111216/911_Process_Repair_Process_Flow_12-16-11.doc)
[911/E911 Major Outage Notification](https://www.centurylink.com/wholesale/downloads/2011/111216/E911_Major_Outage_Notification_12-16-11.doc)
[911/E911 Trap and Trace](https://www.centurylink.com/wholesale/downloads/2011/111216/911-E911_Trap_and_Trace_Process_Flow_12-16-11.doc)

When you report trouble, you should advise the CenturyLink technician that you are reporting a problem at the DS0 level for 911 and provide your Circuit ID. Circuit ID's are provided to the customer at the time of turn-up for service.

**Billing**

For 911 Service, you are responsible for the transport of the 911 call to the 911 SR. For PS/ALI Service purchased from CenturyLink, transport (if required) and feature functionality are billed in either CABS or Ensemble. ~~CRIS.~~

~~Customer Records and Information System (CRIS) bill is described in~~[~~Billing Information – Customer Records and Information System (CRIS)~~](https://www.centurylink.com/wholesale/clecs/cris.html)~~.~~

Ensemble is the new billing system for customers. For questions about the bill, please follow the instructions on the reverse side of each billing statement.

The Ensemble bill is described in [Billing Information – Ensemble](https://www.centurylink.com/wholesale/clecs/ensemble.html).

Carrier Access Billing System (CABS) billing is described in [Billing Information – Carrier Access Billing System (CABS)](https://www.centurylink.com/wholesale/clecs/cabs.html).

**Training**

**Local CenturyLink 101 "Doing Business With CenturyLink"**

* This introductory web-based training course is designed to teach the Local CLEC and Local Reseller how to do business with CenturyLink. It will provide a general overview of products and services, CenturyLink billing and support systems, processes for submitting service requests, reports, and web resource access information.[~~Click here to learn more about this course and to register~~Click here to learn more about this Training.](http://lxdenvmap422.qintra.com:50000/wholesale/training/wbt_desc_lq101.html)

View additional CenturyLink courses in the[~~Course~~ Training Catalog.](http://lxdenvmap422.qintra.com:50000/wholesale/training/coursecatalog.html)

**Contacts**

Contact your [CenturyLink Service Manager](https://www.centurylink.com/wholesale/clecs/accountmanagers.html).

All repair issues should be directed to the Center for 911 Repair at 877-433-1989.  Follow the prompts to properly direct your call.

The Escalation sequence, if necessary, is as follows:

* 1st Level - Customer requests escalation via 911 Repair Center.
* 2nd Level – 911 Repair Center will engage the 911 Duty Manager.
* 3rd Level – 911 Duty Manager will engage Manager, 911 Network & Center Operations.
* 4th Level – Manager or 911 Duty Manager will engage Director, Public Safety Services

**Frequently Asked Questions (FAQs)**

**1. How does a CLEC determine if they order 911 or Enhanced 911 Service?**
Public agencies determine whether Basic 911 or Enhanced 911 service will be used in a particular geographic area, and how each end office switch will access the PSAP. Therefore, the public agency is the primary decision-maker for trunk group design, size and routing. Contact your CenturyLink Service Manager for information regarding Basic 911/Enhanced 911 status for areas where you provide, or will provide, local service.

**2. Does the CLEC need to establish a relationship with Intrado Inc., and the PSAP?**
Yes. You should establish a business relationship with both the PSAP Authority Board and Intrado Inc., prior to ordering service.

**3. How are 911 ES trunks ordered and provisioned?**
Once the pre-planning meetings (if required) have been conducted and basic trunking arrangements have been determined, your CenturyLink Service Manager, with your input, will complete an RG29-0029 form to provision the 911 ES trunk groups

**4. Is CenturyLink or you responsible for updating the E911 database?**
The Ordering section under [Updating/Correcting E911Data](https://www.centurylink.com/wholesale/pcat/911.html#911) provides additional information.

**5. What are the costs for CenturyLink provided 911/E911 service?**
You are responsible for the transport associated with delivering the 911 call to the SR. CenturyLink does not charge you for the components of 911/E911 service. All costs incurred by CenturyLink are billed to the appropriate PSAP. If you incur costs associated with 911/E911 Service, you should contact a PSAP Representative regarding recovery of those costs.

**6. Is the joint pre-planning meeting necessary between you, PSAP, and CenturyLink?**
It is highly recommended that a pre-planning meeting take place between you, PSAP, and CenturyLink prior to ordering 911/E911 service. These meetings have been extremely beneficial for all parties involved. The information shared at these meetings has been instrumental in ensuring successful deployment of 911 services. Contact your CenturyLink Service Manager to schedule a 911/E911 pre-planning meeting.

**7. Are there State specific exceptions associated with 911/E911 Service?**
Yes, Contact your CenturyLink Service Manager for information regarding these exceptions.
Please note for the State of Minnesota:
It is a requirement that a LOA from the State of Minnesota accompany your E911 worksheet(s).  For CenturyLink to validate the LOA provided by the state of Minnesota, there must be an exact match of 2-6 code, the Default Routing PSAP name or the CFA CLLI at the DS0 (T1) level on the LOA and your E911 worksheet(s). If the information doesn’t match the request, it will be returned for clarification and corrections.

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**Last Reviewed:** March 18, 2024

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